

1 11. The reagent of claim 1, wherein the surface marker is CD22.

1 12. The reagent of claim 1, wherein the surface marker is CD74.

1 13. The reagent of claim 12, wherein the antibody is LL1.

1 14. The reagent of claim 1, wherein the onc protein is conjugated to the  
2 antibody through recombinant fusion.

1 15. A nucleic acid sequence encoding the reagent of claim 1.

1 16. A pharmaceutical composition comprising a selective cytotoxic  
2 reagent comprising an onc protein having measurable ribonucleolytic activity joined to an  
3 antibody directed against a cell surface marker expressed by a B cell together with a  
4 pharmaceutically acceptable carrier.

1 17. The pharmaceutical composition of claim 16, wherein the onc  
2 protein has the amino acid sequence of SEQ ID NO:1.

1 18. The pharmaceutical composition of claim 16, wherein the onc  
2 protein is produced by recombinant means.

1 19. The pharmaceutical composition of claim 18, wherein the onc  
2 protein has the amino acid sequence of SEQ ID NO:3.

1 20. The pharmaceutical composition of claim 18, wherein the onc  
2 protein is encoded by the nucleic acid molecule identified as SEQ ID NO:2.

1 21. The pharmaceutical composition of claim 16, wherein the onc  
2 protein is conjugated to the antibody through recombinant means.

1                   22. The pharmaceutical composition of claim 16, wherein the antibody  
2                   is a monoclonal antibody.

1                   23. The pharmaceutical composition of claim 22, wherein the  
2                   monoclonal antibody is humanized.

1                   24. The pharmaceutical composition of claim 23, wherein the  
2                   monoclonal antibody is a single chain antibody.

1                   25. The pharmaceutical composition of claim 16, wherein the antibody  
2                   is directed against a surface marker present on B cell lymphomas.

1                   26. The pharmaceutical composition of claim 25, wherein the antibody  
2                   is selected from the group consisting of RFB4, LL1 and LL2.

1                   27. A method of killing malignant B cells comprising contacting cells  
2                   to be killed with a selective cytotoxic reagent comprising an onc protein having  
3                   measurable ribonucleolytic activity joined to an antibody directed against a cell surface  
4                   marker on B cells.

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6                   28. The method of claim 27, wherein the onc protein has the amino acid  
7                   sequence of SEQ ID NO:1.

1                   29. The method of claim 27, wherein the onc protein is produced by  
2                   recombinant means.

1                   30. The method of claim 29, wherein the onc protein has the amino acid  
2                   sequence of SEQ ID NO:3.

1                   31. The method of claim 29, wherein the onc protein is encoded by a  
2                   nucleic acid molecule identified as SEQ ID NO:2.

1 32. The method of claim 27, wherein the cell surface marker is CD22.

1                   33. A method of killing malignant cells bearing a CD74 cell surface  
2 marker comprising contacting cells to be killed with a selective cytotoxic reagent  
3 comprising an onc protein having measurable ribonucleolytic activity joined to an  
4 antibody directed against CD74.

1                   34. The method of claim 33, wherein the cells to be killed are selected  
2 from the group consisting of neuroblastoma, melanoma and myeloma.

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